DOCUMENT RESUME

ED 322 969 JC 900 466

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TITLE Cognitive Modeling and Reciprocal Teaching of Reading and Study Strategies.
PUB DATE 90
NOTE 85p.
AVAILABLE FROM Cicchetti Associates, 90 Vaill Rd., Watertown, CT 06795 ($8.95).
PUB TYPE Guides - Classroom Use - Materials (For Learner) (051) -- Guides - Classroom Use - Guides (For Teachers) (052)

EDRS PRICE MF01 Plus Postage. PC Not Available from EDRS.
DESCRIPTORS Cognitive Development; Community Colleges; Learning Modules; *Learning Strategies; Listening Comprehension; *Listening Skills; Notetaking; Reading Comprehension; *Reading Strategies; Student Participation; *Study Skills; Teacher Student Relationship; Test Wiseness; Thinking Skills; Two Year Colleges
IDENTIFIERS *Cognitive Modeling; *Reciprocal Teaching

ABSTRACT

These two manuals, one designed for students and the other for instructors, offer information on the development of reading, listening, and study strategies. The student manual begins with information on the instructional approach that will be used and the characteristics of active readers, writers, planners, listeners, and students. The introductory section also outlines the changes between junior high, high school, and college in terms of study strategies, academic conditions and expectations, grading, and study skills. Subsequent sections focus on: (1) study strategies used by successful students; (2) planning and organizing study on a term and daily basis, and starting and completing assignments; (3) previewing strategies for identifying the most important topics in expository texts and fictional narratives; (4) comprehension monitoring strategies; (5) comprehension fix-up strategies; (6) identifying the writing patterns used by authors; (7) strategies for highlighting and taking notes in a text; (8) strategies for listening and notetaking during lectures; (9) preparing for exams; (10) study and memory strategies; and (11) strategies for taking exams. Each section is accompanied by a thinking guide outlining specific steps and activities. The teachers manual begins by reviewing the literature on reading comprehension instruction, the characteristics of passive students, and program goals. The manual contains guidelines concerning cognitive modeling and reciprocal teaching, activating and organizing students' prior knowledge, teaching concepts, visual mapping, and transfer of training. Finally, instructions for using each of the 11 modules in the student manual are provided. (GFW)

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Cognitive Modeling and Reciprocal Teaching of Reading and Study Strategies

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INTRODUCTION TO READING and STUDY STRATEGIES

The lessons have been written to teach you how to read, listen and study more effectively. The teaching will be quite different from traditional teaching. Your teacher will use cognitive modeling and reciprocal teaching to help you learn successful strategies.

Cognitive Modeling or Thinking Aloud

Cognitive modeling means that your instructor will think aloud as he/she shows you a reading or study strategy. The thinking aloud will help you to learn how, when, and why to use a strategy.

Reciprocal Teaching

Reciprocal teaching refers to the teacher and students alternating teaching roles. Initially your teacher will cognitively model a particular strategy such as previewing. After you have received sufficient cognitive modeling, you will be expected to cognitively model the same strategy for the teacher and other students. As you teach the strategy to others, you will be actively practicing the strategy. Many people have noted that the best way to really learn something is to teach it to others.

There are no shortcuts or quick fixes for learning effective study strategies. Learning new strategies requires demonstration, practice and above all, your active participation in the learning process. Your active participation is the key to learning new, more effective strategies.

Students with low grades and achievement are just as intelligent as high achievers. However, low achievers tend to be passive rather than active learners. The goal of this program is to teach you to become an active, independent learner.

Characteristics of Active Readers

A number of studies have described the characteristics of active, effective readers. They preview reading material, set reading goals, make up questions during reading, monitor their understanding and correct or fix-up lack of understanding. These are active reading processes.

Characteristics of Active Writers

Other studies have described the characteristics of active writers. They spend considerable time planning, gathering and organizing their material. As they write, they continually revise and edit their writing for clarity. In contrast, poor writers spend a minimal amount of time gathering and organizing material and revising and editing is usually a quick check of their final product.

Characteristics of Active Planners

These students know how to plan and allocate time for different tasks. They have techniques for getting started on tasks, avoiding delays and maintaining concentration. They usually maintain both a long-term and short-term calendar for assignments.

Characteristics of Active Listeners/Notetakers

These students usually preview lecture material before a lecture. They form questions about unfamiliar topics and raise questions to themselves during the lecture. They take notes in shorthand form and clarify and add to their notes after class.

Characteristics of Active Studying

These students distinguish important from unimportant information and highlight only key points. They assess their comprehension as they study and will reread, read ahead, look up terms as necessary. They try to tie in new material with their existing knowledge, predict test questions and review material over a period of time. They try to generate answers to questions rather than just rereading or reciting information.

Postive Expectations

Successful students are goal-directed. They expect to be successful and believe the academic success is due to the strategies and effort they have used and not luck or teachers' preferences and whims.

SUCCESSFUL STUDY STRATEGIES

Teaching patterns, grading, and expectations change from junior high school to high school and college. Think about the differences and how you may have to adjust your study patterns. The differences are adapted from a study by Weinstein, et. al. (1988).

TEACHING

JUNIOR HIGH SCHOOL	HIGH SCHOOL	COLLEGE
More demonstrations, some lectures	More lectures	Mostly lectures
	Lectures often correspond with text	Lectures may not correspond with text
More visual and study aids such as outlines and review sheets	Less visual and study aids	Few visual and study aids
More time and personal contact with teachers	Less time and personal contact with teachers	Minimal time and contact with teachers
More individual feedback about grades	Less individual feedback about grades	Minimal individual feedback about grades

ACADEMIC CONDITIONS AND EXPECTATIONS

JUNIOR HIGH SCHOOL	HIGH SCHOOL	COLLEGE
		Classes meet less frequently and for fewer hours per week
		An entire course and textbook will be completed in 15 weeks
Reading assignments are brief	Reading assignments are longer and have to be completed more quickly	Reading assignments are very long and have to be completed very quickly
Less independent reading and studying	More independent reading and studying	Much independent reading and studying
Teachers are more likely to adjust the pace of instruction	Teachers are less likely to adjust instruction. They assume students have learned many concepts	Teachers rarely adjust instruction. They assume students have background knowledge

GRADING

JUNIOR HIGH SCHOOL	HIGH SCHOOL	COLLEGE
Less academic competition	More academic competition	Considerable academic competition
Many exams and quizzes determine grades for marking period	Fewer exams and quizzes determine grades for marking period	Semester grades are often based on two or three exam grades
Few essay exams	Some essay exams	More essay exams
Less work is required to earn A's and B's	More work is required to earn A's and B's	Much more effort is required to earn A's B's
Few major writing assignments, projects	Some major writing assignments such as term papers	More major writing assignments
Exam questions are easier to predict	Exam questions are more difficult to predict	Exam questions are very difficult to predict

STUDY SKILLS

Taking lecture notes is less important	Taking lecture notes is more important	Taking lecture notes is very important
Highlighting or taking notes from the text is less important	Highlighting or taking notes from the text is more important	Highlighting or taking notes from the text is very important
Students do not have to monitor and evaluate their own progress	Students sometimes have to monitor and evaluate their own progress	Students must monitor and evaluate their own progress
Managing and planning study time is less important	Managing and planning study time is more important	Managing and planning study time is very important
JUNIOR HIGH SCHOOL	**HIGH SCHOOL**	**COLLEGE**
Students usually do not have to initiate requests for additional help	Students are more responsible for getting additional help	Students must initiate requests for additional
Efficient reading comprehension skills are less important	Efficient reading comprehension skills are more important	Efficient comprehension skills are very important

Teachers help with reading a text	Teachers are less likely to help with reading a text	Teachers rarely help with reading a text

Weinstein, C. et.al., "The High School-to-College Transition," Innovation Abstracts, Sept. 1988, University of Texas at Austin.

These are general statements about junior high schools, high schools and colleges and there will be exceptions to these statements.

Please check the statements that you think will require the most adjustment on your part. How will you make the adjustments?

SUCCESSFUL STUDY STRATEGIES

We all have study habits or patterns for studying. Some study habits contribute to effective learning and good grades, while other study habits are ineffective and lead to poor grades. The following study habits are associated with good grades. Students who are successful:

1. Develop and maintain marking period or semester study plans for all courses. Semester study plans contain reading assignments, possible exam dates, due dates for papers and projects, as well as holidays, social, family and work schedules.

2. Develop and maintain daily study plans for all courses which contain reading assignments, homework, and quiz dates.

3. Use marking period or semester plans to help plan their studying during a semester.

4. Preview chapters before they actively read the chapters to determine the most important topics and what they know or do not know about these topics.

5. Identify authors' writing patterns (descriptive, explanatory, sequential, compare/contrast, narrative) as they preview chapters.

6. Preview chapters and set goals for reading (adjust their reading for unfamiliar topics, etc.).

7. Make up questions about paragraphs before they read the paragraphs.

8. Read paragraphs and try to answer their questions in summary form.

9. Try to fix-up and clarify meaning by reading ahead, rereading, creating examples or visual images or using a dictionary or glossary, if they are unable to answer their questions because words and/or sentences are unclear.

10. Actively read and highlight or take notes about key points in each paragraph.

11. Actively read and annotate (note) important points in the margins of text or take notes from the text.

12. Actively read and highlight, or take notes from their texts <u>before</u> the teacher's lecture about the material.

13. <u>Do not</u> try to take class notes on a word-for-word basis during lectures.

14. Use abbreviations and shorthand as they take notes.

15. Ask themselves questions as they listen to lectures such as, "What does _____mean?, How does_____tie in with _____?, What is the instructor leading to?"

16. Add to and organize their notes after each lecture. Math notes (examples are reworked and recopied.

17. List likely exam topics based on their lecture notes and active reading and highlighting of the text.

18. Make up questions about the topics.

19. Do not try to memorize answers by reading and rereading or repeating answers.

20. Outline answers and study by elaborating (adding to) the outline.

21. Identify easy and hard questions on exams and do the easy items first.

22. Underline key terms in the exams questions such as, "all of the above, which is not, all of the following except."

These are some of the strategies that successful students use. Check the strategies that you think you should use more consistently or effectively.

PLANNING AND ORGANIZING STUDY

What is the secret of successful students? How do they complete assignments on time without last minute cramming and rushing?

Successful students complete both semester or marking period study plans and daily study plans. The semester plan contains long range study requirements such as reading assignments, probable quiz and exam dates, due dates for papers or projects, etc. The completion of a semester plan will help you avoid missing assignments and rushing your studying. The semester plan gives you a "big picture" and should help you anticipate when and how much you will have to study. For example, you may find that two term papers are due in the 12th week. Therefore, you must start three or four weeks before the due date to do an adequate job of researching and writing each paper.

The daily study plan contains short term study requirements such as homework/ reading assignments for your various courses, as well as social, job, family, and athletic responsibilities. The daily plan helps you determine how much time various assignments will require and how they can be "fit in" with other responsibilities.

GUIDE FOR USING A MARKING PERIOD OF SEMESTER PLAN

1. Compare the quiz and exam schedules for the different courses. Which course(s) will require consistent, steady studying? Why?

2. Which course(s) may not require consistent studying? Why?

3. Which course(s) will require the most reading?

4. Which course(s) are most likely to use lectures? Why is that important?

HOW TO USE A DAILY STUDY PLAN

1. Put dates in the calendar. Check the school calendar for holidays, vacations, etc.

2. Examine your semester study plan. Place the probable dates for exams, quizzes and papers in your daily study plan.

3. After you have completed a class, list the topics discussed and corresponding chapters or pages. Also, list any homework/readings, or practice assignments.

4. After you have completed the homework, readings, and/or practice, draw an X through the date.

5. Bring the daily study plan to each of your classes and complete it. Allow your study strategies instructor to check and discuss your plan.

HOW TO START AND COMPLETE ASSIGNMENTS

Many students procrastinate starting and completing reading assignments, homework, and papers. Non-studying activities such as talking to friends, watching tv, and listening to music, occupy time and studying is put off.

You can increase your studying by arranging conditions so that studying activities are followed by non-studying activities such as watching tv, listening to music, etc. For example, you would study for a set amount of time (30 minutes) and then allow yourself the opportunity to watch tv. Therefore, the pleasant, non-studying activity follows and rewards the studying.

Students also delay the start of a paper or project because it appears to be "too big to tackle." This type of problem can be avoided by examining the paper or project, breaking it down into smaller parts, and then starting and completing the samller parts. For example, a five page research paper could be broken down into:

Part 1 - Selecting a topic

Part 2 - Listing possible research sources

Part 3 - Taking notes from the sources

Part 4 - Outlining the paper

Part 5 - Writing the paper

Part 6 - Editing and revising the paper

REMEMBER:

1. Study first and socialize or watch T.V., etc. after you have studied.

2. Break down large tasks into smaller, more manageable parts, and complete only one part at a time.

3. Start studying for brief time periods (10-15 minutes) and then reward yourself with a break for T.V., Music, etc.

4. Start to study early and build procrastination time into your schedule.

PREVIEWING STRATEGY

(Social Studies , Science or Expository Texts)

How does previewing help you understand and remember information?

Previewing helps you.

1. Identify the most important topics in a chapter. These topics will usually require slow, careful reading and highlighting.
2. Identify important topics that are familiar or unfamiliar to you. Unfamiliar topics will usually require slow, careful reading.
3. Organize the important topics.
4. Identify the author's writing plan for getting information to you.
5. Set a purpose or goal for reading. Goals direct your attention and effort.

How do you preview a chapter?

The first step is to identify the most important topics in a chapter. The number of paragraphs about a topic is a good signal of the topic's importance. The number of diagrams, tables or pictures about a topic are also signals of the topic's importance. These topics may need slow, careful reading.

The next step is to determine what you know or do not know about the important topics. What you already know about a topic is the best predictor of your understanding of the topic. For example, if you know very little about the Civil War, you will have some difficulty reading and understanding a chapter about the Civil War. If certain topics are unfamiliar, you may set as a goal, the understanding of those topics.

The next step is to identify the author's writing pattern or plan (descriptive, explanatory, sequential). Then, you look for this plan or pattern in your active reading.

Finally, you should set goals for active reading of the text.

Examples of goals are:

a. Read topics A and B carefully because they are unfamiliar.
b. Read topics C and D quickly because they are familiar.
c. The writing pattern is sequential, so pay attention to the order of events.

Follow these steps:

Step 1 - Examine the title, headings, diagrams, and number of paragraphs about each topic. Identify important topics.

Step 2 - Organize and group the topics and draw a visual map.

Step 3 - Examine the important topics. Identify important, unfamiliar topics.

Step 4 - Identify the author's writing pattern or plan.

Step 5 - Set goals for active reading. The importance and unfamiliarity of topics should be considered in setting reading goals.

Previewing Strategy
(Stories or Narratives)

How do you preview a story?

The first step is to look at the title, cover, pictures or illustrations. They often give you information about the characters and setting and type of story. Think about what you already know about the characters, setting and type of story.

Novels will have a table of contents and chapter titles. If you are reading a novel, read the chapter titles think about what you already know about the chapter titles. Short stories do not have a table of contents or chapter titles. The next step is to make PREDICTIONS about the story. For example:

Why did the author choose the title?
What do you think the setting(time place) has to do with the story?
What problem or goal will the characters deal with?
How might the characters try to solve the problem or reach the goal?

Please remember that you will make many PREDICTIONS as you read the story. As you read some Predictions will be accurate or come true and other Predictions will not. You should continue to change and revise your predictions.

Finally, you will want to set a purpose or goal for reading the story.

THINKING GUIDE

PREVIEWING

(Social Studies, Science)

Book_____Chapter_____ Pages_____

1. What seem to be the most important topics in this chapter?
   a.
   b.
   c.
   d.
   e.

2. How would you organize and group these topics?
   Can you make a visual map or diagram of these topics?

3. What seems to be the author's purpose and writing pattern(s)?
   (descriptive, explanatory, sequential)

4. What topics are unfamiliar and may require more careful reading/rereading?
   a.
   b.
   c.
   d.

5. Write a series of questions about what you expect to learn from reading the chapter(s).
   a.
   b.
   c.

THINKING GUIDE

PREVIEWING

(Stories or Narratives)

Book _____ Pages _____

1. What type of story are you reading?

2. What is the author's purpose in writing the story?

3. What do you already know about the author, type of story and the content?

4. What do you think the setting has to do with the story?

5. What do you think is the problem or goal facing the characters?

6. How will the characters try to solve the problem or reach the goal?

COMPREHENSION MONITORING STRATEGIES

What is comprehension monitoring?

Readers monitor comprehension when they ask themselves questions while they read. They ask questions about what words, phrases or sentences mean. Self-questioning and summarizing force readers to "take stock" or monitor their understanding of the reading material. Good readers monitor their comprehension and are aware of their understanding or lack of understanding. You must be aware of your understanding, if you are to improve your reading comprehension.

How do you monitor comprehension?
Question making (Social Studies, Science Books, etc..)

The first step is to check on your understanding of paragraph. Try to follow those steps with science, social studies texts, etc..

1. As you read the text, pause and question your understanding of unfamiliar words, phrase, sentences.

2. Question your understanding of major heading, subheadings, and words in italics. These are usually important information. Also the first and last sentences in a paragraph often contain important information. The first sentence is often a topic sentence. You may make up questions about topic sentences.

3. If you are able to summarize answers to your questions, your comprehension is going well. Continue to read.

You can form questions by saying;
what are, why did, how does, who was, what does.
Example:
Topic sentence: Baseball is called the American national sport.
Question: Why is baseball the national sport?

You can make each of the following topic sentences into a question:
Topic sentence : Smoking, stress and being overweight all contribute to heart disease.

Question: _____.

When paragraphs do not begin with topic sentences, you should look for headings within the chapter or words in **bold** type and turn them into questions.

Heading: Causes of Heart Disease
Question:_____.

Words in italics: "peninsula"
Question:_____.

Making Predictions (Narratives)

Try to make predictions for short stories and novels as you read. Active readers make up predictions about the actions or characters. Active readers continue to read to determine if their prediction is accurate or not accurate. In this way, they check their understanding of the story. Examples of predictions are:

Tom will not marry Jane.
He will not get that new job.
Cindy will leave the small town for the big city.

Active readers also make up questions about the meaning of unfamilar words, phrases or sentences.

What does _____mean?

Summarizing or Paraphrasing

Summarizing or paraphrasing reading material is another way to check your comprehension. You might pause after reading a paragraph or a page of a book and try to summarize or paraphrase what you have read. If the material is difficult, you may want to pause and summarize after you have read a paragraph. If you are able to summarize, your understanding is going well, and you should continue reading.

Summarizing means that you say to yourself main points and important information. Unimportant information and repeated information is omitted. Information that is repeated is likely to be important. Also the first and last sentences in a paragraph are likely to contain important information.

Paraphrasing means that you state to yourself main points and important information in your own words. Paraphrasing is more difficult than summarizing. However, readers who paraphrase material have better understanding than readers who summarize material. Try to paraphrase whenever possible.

THINKING GUIDE

COMPREHENSION MONITORING

Expository Tests

Step 1 - Did you make up questions about words, phrase sentences that were unclear?

Step 2 - Were you able to summarize or paraphrase a paragraph(s), page(s) of the text?

Step 3 - Were you able to answer your questions? If you were not able to answer, try a comprehension fix-up strategy.

Step 4 - If you were not able to summarize or paraphrase a series of paragraphs or a page, try a comprehension fix-up strategy.

Stories or Narratives

Step 1 - Did you make predictions about the events in the story?

Step 2 - Did you make up questions about words, phrases, sentences that were unclear?

Step 3 - After reading a part of text, were you able to determine if your prediction was accurate?

Step 4 - If you were not able to determine whether your prediction was accurate, try comprehension fix-up strategies.

COMPREHENSION FIX-UP STRATEGIES

When do you fix-up comprehension?

During your reading, you may find that you can not summarize or answer your questions. At this point, you should try to fix-up or improve your comprehension of the paragraph. Good readers try to fix-up comprehension by reading ahead, rereading, creating visual images, examples etc.

What are some common comprehension problems?

There are some common reasons why readers cannot summarize or answer questions.

The reader may not:

1. understand a key word or words.
2. understand a phrase or sentence.
3. understand how one sentence relates to another sentence.
4. understand the purpose and meaning of a paragraph.

How do you fix-up comprehension?

If you are not able to understand a key word or words or a phrase or sentence, you may choose to:

1. Ignore the Word or Phrase and Read on. If you decide that a word or phrase is new but is not important, you may choose to ignore the word and read on. A new word or word that is difficult to pronounce may be ignored if you understand the rest of the paragraph. However, if the word is repeated or important, fix-up your comprehension.

2. Think of an Example - Pause and use your background knowledge to make up an <u>example</u> about the unfamiliar word, phrase or sentence.

3. Think of a Visual Image - Pause and try to make up a picture or image in your mind of a word, phrase, setting, action. Visual imagery is especially helpful with stories (narratives).

4. Read Ahead and Connect Information - Continue to read to clarify and better understand a word, phrase, sentence etc. This is especially helpful with descriptive writing since details and examples will help you to make sense of the unclear parts of the text.

5. Reread and Connect Information - Reread the unfamiliar word, phrase, sentence. Try to create an example, visual image or connections with other parts of the text. This strategy is helpful when you cannot summarize or paraphrase parts of the text.

6. Use the Writing Pattern, Signal Words and Pronouns to Make Connections - This strategy is helpful when you don't understand the relationship among sentences or paragraphs. Good writers use signal words to help readers make connections among sentences and paragraphs. Generally, the more signal words in a paragraph, the easier it is to understand the relationship among sentences.

Descriptive Writing -

Signal words such as "important features are, characteristics of, for example, for instance, an illustration of, help to clarify the relationship among sentences.

Compare/Contrast Writing -

Another type of descriptive writing is a compare-contrast pattern. The author describes two or more ideas. Signal words such as "while, although, in contrast, compared to, however, on the other hand," help to clarify the relationship among sentences.

Explantory Writing -

Signal words such as "therefore, as a result of, an outcome of, reasons for, because of, in conclusion, it follows that" help to clarify the relationship among sentences.

Sequential/Procedural Writing -

Signal words such as "then, before, next, second, further, in addition to, also" help to clarify the relationship among sentences.

As you read, you may look for, circle or highlight these **SIGNAL WORDS** and use them to clarify the relationships among sentences.

Pronouns - Look for pronouns which link and connect sentences.

Good writers use reference ties (pronouns) to connect and link sentences. Consider the following paragraph.

> The Vietnam War was very controversial. President Johnson strongly supported the war. Senator Eugene McCarthy was opposed to the war. He was supported by many college students.

The sentences are tied together by the pronoun (He.). The reader must infer and connect (He) to Senator McCarthy and not President Johnson. If the reader makes an incorrect connection, it would appear that President Johnson was supported by college students.

As you read look for pronouns such as he, she, it, we, they, them, their, our, that, those, etc and link them to a person, place, thing or idea in a preceding sentence.

THINKING GUIDE

COMPREHENSION FIX-UP STRATEGIES

When you did not understand a word, phrase, sentence or relationship among sentences, did you:

1. Ignore the word or phrase and read?
2. Pause and think of an example?
3. Pause and think of a visual image?
4. Read ahead and connect information?
5. Reread and connect information?
6. Use signal words, pronouns, writing pattern to make connections.

IDENTIFYING WRITING PATTERNS

Why should you learn to identify writing patterns?

Authors follow a writing pattern when they write a book. Your awareness of an author's writing pattern will help you comprehend the book.

If you learn to identify writing patterns, you will be better able to understand and remember what you have read. For example, if you are aware that an author organizes information in a sequential pattern, you can try to understand and remember the order of events.

Three common writing patterns in texts will be explained and examples will be provided. Please keep in mind that an author may use more than one pattern in a textbook.

TYPES OF WRITING PATTERNS

The three types of writing patterns are: (1) Descriptive, (2) Explanatory, (3) Sequential.

DESCRIPTIVE WRITING PATTERN

The author describes, defines and gives examples of some idea. The writing pattern is often found in science texts.

EXPLANATORY WRITING PATTERN

The author gives reasons for some idea or event. This writing pattern is often found in social studies texts.

SEQUENTIAL WRITING PATTERN

The author gives a sequence or time order for events. This writing pattern is often found in social studies texts.

The author provides a series of procedures or steps for the reader to follow. The writing pattern is often found in mathematics texts, science manuals or manuals in general.

PARAGRAPHS

Each paragraph in a text generally follows the overall writing pattern of the text. Good writers often begin paragraphs with topic sentences. A topic sentence is a general or umbrella statement which gives the reader the main point or idea of a paragraph. A topic sentence provides a framework for the other sentences in a paragraph.

Writers use the other sentences in a paragraph to develop or give meaning to the idea in the topic sentence. Writers may use other sentences:

1. To describe, define, list details or give examples of the main idea.
2. To explain, give reasons or support for the main idea.
3. To give a sequence or time order for events or a series of steps or procedures.

SIGNAL WORDS

Each writing pattern uses specific signal words. The signal words help readers understand the relationship among sentences.

1. Descriptive writing - signal words such as;"important features are, characteristics of, for instance, for example, a feature of, and an illustration of" help you to understand the meaning of the ideas.

2. Explanatory writing - signal words such as; "thus, therefore, as a result of,because of, so, if, then, in conclusion, an outcome of, reasons for, and a consequence" help you to understand the meaning of the ideas.

3. Sequential writing - signal words such as; "then, before, next, second, further, in addition, and furthermore" help clarify the meaning of events or procedures.

PRONOUNS

Pronouns also can help you to understand the relationships among sentences and ideas. Pronouns tie together sentences. If you do not tie a pronoun with the correct person, place or idea, you will lose the meaning of text.

Example -

The police chief and mayor were very concerned with drug pushers in their city. <u>They</u> asked for more police officers.

The sentences are connected or tied together by They = police chief and mayor. If reader does not make the connection the meaning is lost.

Try to pay attention to signal words and pronouns. They will help you to make connections among sentences and ideas.

SAMPLES OF WRITING PATTERNS

Descriptive - Dinosaurs lived long ago. Many dinosaurs were very large. The largest dinosaur was the brontosauras. Museums often have dinosaur bones for people to see.

Descriptive - Many hundreds of years ago, workers called serfs farmed a lord's land. The serfs were quite poor and could not leave for other work. They had to give a lord most of their crops. The lord provided housing and protection for the serfs.

Descriptive -

A feature of deserts is the great range of temperature from day to night. The difference between day and night temperatures is known as the daily range. During the day, the skies are often sunny and clear and the temperatures are over 100 degrees. For example, Death Valley often has daily temperatures of 120 to 130 degrees. However, during the night, the weather can become chilly and cold.

Explanatory -

Dinosaurs died or became extinct many thousands of years ago. We think that temperatures became colder. The dinosaurs could not adjust to the weather and they died off.

Explanatory -

The American legal system is a fair system. A jury of fairly selected citizens determine the guilt or innocence of the person on trial. Only factual evidence may be presented at a trial. Lawyers have the right to question the truth and accuracy of the evidence. Then the jury decides the guilt or innocence of the person.

Explanatory -

The Great Depression of 1929 severely damaged the economy of the United States. The Depression lasted for ten years. More than 122 million people were unemployed by 1932. Banks had to close because of lack of funds. Many businesses and companies were forced into bankruptcy and had to close down.

Sequential -

An English archaelogist named Howard Carter was looking for King Tut's tomb. Carter began his search in 1907. The search was expensive so Lord Carnavon paid the cost for the search. For 15 years Carter searched. Finally in 1922, Carter found the tomb of King Tut. There were many treasures in the tomb.

Sequential -

The Germans fought Russia during World War II. In the Spring of 1942, the Germans attacked Russia in an attempt to knock Russia out of the war. The Germans captured the Russian naval base. In the Fall of 1942, the Germans attacked Stalingrad, a large city on the Volga River. The Volga River provided supplies for the Russian Army and control of Stalingrad was critical. After months of fierce fighting, the Germans were finally defeated at Stalingrad.

Sequential -

Adding Like Numbers

Only like numbers can be added.

Example: 5 dollars and 3 dollars = 8 dollars
2 feet and 4 feet = 6 feet

First, write the like numbers under one another with like units in the same vertical line.

Second, add the numbers in each vertical line.

Third, simplify the demonimate number found in the second step.

Example: Add 7 feet 3 inches; 3 feet 5 inches, and 2 feet 7 inches

7ft.	3in.
3ft.	5in.
2ft.	7in.
12ft.	15in.
13ft.	3in.

THINKING GUIDE FOR
IDENTIFYING WRITING PATTERNS

1. What writing pattern(s) does the Author use?
   - Descriptive
   - Explanatory
   - Sequential

2. What signal words help to identify the pattern?

HIGHLIGHTING/NOTETAKING STRATEGIES

Why highlight and annotate your textbook?

Highlighting or underlining portions of a textbook helps you prepare for studying. Highlighting will identify and separate important from unimportant information. Also, highlighting will reduce the amount of information to be studied. Generally, 25-30% of a textbook page is important enough to be highlighted and will be a source of possible exam questions.

Annotating a text refers to making notes in the margins. The annotations and meaning to a text. For example, we know authors follow a pattern in writing texts. The pattern of writing is called the text structure. If you identify and note the writing pattern in the margin of your text, you will better understand and remember the highlighted information. A text may follow a descriptive/definition/example pattern. In the margin, you might write features, examples, etc. These notes will help you remember highlighted information.

Taking notes from a text also helps prepare you for studying. It helps you separate important from unimportant information and reduces the amount of information to be studied.

Process of Highlighting

Highlighting a text should accompany comprehension monitoring and fix-up strategies. As you develop questions from topic sentences and headings and read to answer these questions, you should highlight or underline your answers.

You should highlight key phrases and not entire sentences. Omit articles (a, an, the), auxiliary verbs (is, are, etc., unnecessary prepositions (of, by). Later, as you study the highlighted material, you can elaborate or add to the highlighted portions.

In public schools, you are not allowed to write in textbooks. Therefore, you follow the same process for highlighting except that you write the questions and answers in your notebook. Follow the same process that is presented in the listening and notetaking module:

1. Divide the notepaper in thirds, one-third for questions and two thirds for notes and elaborations. Note the chapter and pages.

2. Write questions from headings and topic sentences on the left and answers to the questions on the right.

3. The answers should be in phrases and in shorthand. Unnecessary words should be omitted.

Process for Annotating

Your identifying and labeling of writing patterns can help you study and remember information. You can label the writing pattern in the margin of the text.

Example:

Description	Sequential	Compare/Contrast	Explanatory
feature	Step 1	feature-vs-feature	Reason 1
example	Step 2	example-vs-example	Reason 2

This annotating will help you remember the highlighted information.

In public schools where you are not allowed to write in textbooks, you can annotate the written notes you have taken from the text.

Example:

Motherese is a type of communication mothers use in talking to their young children. Often the mothers speak slowly and simply to their children. Unnecessary words such as a, an, and the may be omitted. People, places and objects are named and pronouns are not used.

Pages	Chapter
Q. What is Motherese"?	type of comm. used with young <u>children</u> characteristics speak slowly simply name people, things don't use pronouns

QUESTION

Attitudes

An attitude is a set of beliefs. We will like or not like certain events, objects, situations and people. People develop attitudes about objects such as religion, economic policies, groups of people, etc. Attitudes are based on learning (imitation, reinforcement and punishment).

Write a question for the paragraph, actively read the paragraph and highlight and annotate the paragraph or take notes from the paragraph.

Question	Answer

THINKING GUIDE FOR HIGHLIGHTING/NOTETAKING

1. What writing pattern(s) does the author use?

2. What questions can you make up for each paragraph? Why did you make up each question (i.e., word in italics, topic sentence)?

3. Did you write the questions in the margin of the text or in the left hand margin of your notebook and highlight or note answers in the right half?

4. Did you highlight or note only key phrases and not entire sentences?

5. Are your highlights or notes approximately 25% of the written material?

LISTENING/NOTETAKING STRATEGIES

Why should you take lecture notes?

In lecture courses, listening is your primary means of obtaining information. Many of your instructors will use a lecture/discussion method of teaching. Instructors often base exam questions on lecture notes and the textbook. Good lecture notes will contribute to good grades.

Instructors, however, will not write out the lecture notes on the chalkboard or "dictate" the notes. You will have to learn to identify important topics, develop your own system of shorthand for notetaking, and then elaborate on the notes. You will have to learn to make up questions about key topics, take notes as you answer the questions, and "fix-up" your lack of comprehension. You will find that listening comprehension and notetaking are very similar to reading comprehension.

Notetaking Suggestions:

1. Choose a loose-leaf notebook. The advantages of a looseleaf notebook are that it allows you to add class handouts, review sheets and quizzes to your lecture notes.

2. Organize your notes by dates, chapters and pages. Divide you notebook pages in thirds. Use one-third for writing questions and the other two-thirds for notetaking.

3. You may write questions about topics that you did not understand in your textbook and topics that the lecturer emphasized. You may also elaborate by adding your own thoughts, or reworking examples. You may also elaborate on your lecture notes by adding information from your textbook. Be sure to skip lines so that you can add information from the text. Elaborations will make your notes organized and meaningful and more likely to be remembered.

4. Save two or three inches at the bottom of the page. Use this space to write possible exam questions from the notes.

Example:

Chapter_____, pages_____ to_____ Date_____

QUESTIONS	NOTES AND ELABORATIONS

POSSIBLE EXAM QUESTIONS

BEFORE THE LECTURE

Actively read a chapter before the lecture about the chapter is given. If you have previewed, actively read, and highlighted the chapter, your understanding of the lecture will be improved. Taking notes during a lecture will be easier if you are familiar with the topics of the lectures, the new vocabulary words, the main ideas, etc. Going into a lecture "cold" is a big mistake. **PREVIEW AND READ RELATED TEXT ASSIGNMENTS IN ADVANCE!**

However, there may be topics in the text that you do not fully understand. Turn these topics into questions and write them in the Questions and Elaborations part of your notes. For example, you may not understand the concept of "experimental control." You could write in the questions section, "What are the features of experimental control?" As you listen to the lecture, you try to answer your questions. **WRITE QUESTIONS ABOUT UNFAMILIAR OR UNCLEAR TOPICS!**

Your textbook is always there for re-reading, reviewing, or studying, but a lecture is a one time event. You will not be able to review a lecture to clarify unfamiliar or difficult topics. The writing in textbooks is usually better organized and sequential than an instructor's lecture. Consequently, students often find listening comprehension more difficult than reading comprehension. **PREVIEW, READ AND HIGHLIGHT IN ADVANCE OF THE LECTURE!**

DURING THE LECTURE (NOTETAKING)

Efficient notetakes use fewer words to take notes than inefficient notetakers. Often, inefficient notetakers try to take literal, word-for-word notes and never grasp the meaning of what is being said. Most notes should be recorded as phrases rather than sentences. If your notes are in sentence form, you are including too much detail. Try to omit unimportant words such as articles (a, an, the) and auxiliary verbs (is, are).

Efficient notetakers also develop their own shorthand systems so that they can focus their attention on noting answers to questions. It is difficult to note answers to questions if you are trying to write out each important word.

One type of shorthand is writing out the first two or three letters of long words. Examples:

definition	- def	Important	- imp
significant	- sign	biology	- bio
Western Civilization	- WCIV	chemistry	- chem

Another type of shorthand is omitting the middle part of long words. Examples:

psychology	- psy___gy	relationship	- rel___ship
sociology	- soc___gy	observation	- obs___tion
population	- pop___tion		

Another type of shorthand is using a single symbol to represent a word. Examples:

and	@	equal	=	number	#
positive	+	the	t		

Indentations can help you separate main topics from supporting details. Example:

Reinforcement
- positive reinf
- negative reinf

Write out terms and proper names the first time. Show your abbreviation in parenthesis after the term or name. Use the abbreviation throughout the rest of your notes. Examples:

correlation (cor) democratic (dem)

Express number numerically.

Examples:	one/1	first/1st
	two/2	second/2nd

Indicate dates numerically.

Examples: December 7, 1942 as 12/7/42

Omit a, an, the, and unimportant verbs and adjectives.

Examples: A cause of the Civil War was the issue of slavery./
Cause of CW = slavery

Omit vowels and keep only enough consonants to make the word recognizable.

Examples: background/bkgd
mixture/mxtr
develop/dvlp

DURING THE LECTURE (WRITING QUESTIONS)

Try to identify how each instructor emphasizes important topics. Some instructors write important topics on the chalkboard. Other instructors may use repetition of terms, pauses, gestures or changes in voice level to indicate important topics.

Lecturers may use some of the following techniques to emphasize their main points. They may

1. repeat a point.
2. pause before or after a point.
3. summarize a point.
4. change their voice level.
5. gesture or move.
6. define or list.
7. say that a topic is important.

8. write a topic on the chalkboard.

9. use a signal words.

Some of the signal words are:

importance of	criticism of	list of
advantages of	description of	uses of
benefits of	types of	steps of
disadvantages of	kinds of	methods of
problems of	characteristics of	how to
causes of	differences between	main points of
results of	contrast between	
evaluation of	similarities between	

Identify important topics and turn the topics into questions. Write the questions in the Questions part of your notes. Listen to the lecture for answers to your questions and write the answers in the Notes part. **REMEMBER, TURN IMPORTANT TOPICS INTO QUESTIONS. YOUR LISTENING FOR ANSWERS TO YOUR QUESTIONS WILL KEEP YOU "TUNED" IN TO THE LECTURE!**

EXAMPLE OF NOTES

Chapter 10 , Pages 300 to 325 , Date 9/25

Questions and Elaborations	Notes
	Topics -
What are characteristics of rote rehearsal? (reh)	Rote reh - non-meaningful reh. - info. not organ__ed

	- info. not tied in w/ existing knowledge - easily forgotten
What are ex. of rote reh.?	Ex. repetition, reciting
Students call this "memorizing"	re-writing re-reading

Math/Science Notetaking

Science and math instructors usually demonstrate and explain how to solve a particular type of problem. In the left column, Questions and Elaborations, note the type of problem and the formula or rules that must be followed. Note why the instructor used a particular method. Note the first step in the process and number the remaining steps. Be sure to indicate how you get from one step of the problem to another.

Questions and Elaborations	Notes
Type of Problem? Formula or Rule? Why this Formula? Step 1 Step 2 Step 3	

FIXING UP OR CORRECTING NOTES

As you listen to a lecture, you may find that you cannot answer your questions. You can fix-up your notetaking by:

1. Continuing to listen to the lecture with the expectation that your questions will be answered. If the instructor begins to shift to another topics, you may

2. Ask the instructor to give an example or clarify your unanswered question.

3. Waiting until after the lecture and asking the instructor to clarify the question.

At times, instructors may "lose" you. You can focus your attention by asking yourself questions such as:

1. What point is the instructor trying to make?

2. What is the instructor leading to?

AFTER THE LECTURE

YOUR NOTES ARE THE ANSWERS TO THE QUESTIONS THAT YOU WRITE

When you add your own words and organize your notes, you are much more likely to remember your notes. Try to do this immediately. If you wait three or four days, you are likely to find that your notes are difficult to organize and understand. As you elaborate, you may add labels such as "def., ex., cause, conclusion, step 1, step 2, letters or numbers to outline, etc."

Math and science instructors often work through an example on the chalkboard. Copy the example. Label the steps in the process and later rework the example in the Elaborations part of your notes. Say the steps aloud as you rework the example. Skipping steps is a common problem. Always rework the instructor's example before you do homework.

REMEMBER, IMMEDIATELY ELABORATE ON YOUR NOTES! This enables you to fill in missing words and to answer questions you did not understand during class. You may also add details and examples to your notes. You may want to elaborate on your notes with other students from your class. Form a study group and elaborate together. Other members of the group are likely to add details or examples that you may not have noted.

PRACTICE ACTIVITY

Assume that your instructor has given you the following information in a lecture. Take notes from this paragraph. Evaluate your notes using the checklist at the end of the module.

> Following the Civil War, Congress blocked President Johnson's program of reconstruction of the South for a number of reasons. First, Congress wanted to reduce the President's powers. Second, many people believed that the South should be more severely punished. Third, the Republican dominated Congress feared that with the Southern states back in the Union, the Democrats could win the next election.
>
> U.S. History, Chapter 12, pages 250-260

Question	Notes and Elaborations

THINKING GUIDE FOR LISTENING AND NOTETAKING

1. Did you label your notes with date, chapter, topic and pages?

2. Did you set up your notebook with questions on the left side and answers and elaborations on the right side?

3. Did you use abbreviations and shorthand to write your questions and answers?

4. If you cannot answer your questions, do you try to fix up your notes?

   Continue to listen for answer.
   Ask for clarification.
   Wait and ask questions after class.

5. If you are taking math/science notes, did you copy the model example exactly and number the steps?

6. If you are doing math/science homework, did you rework the model example before you started your homework?

PREPARING FOR EXAMS

What topics will be on an exam?

The topics in your lecture notes and highlighted or outlined parts of your textbook are likely to be on an exam. The notes and highlights of outlines should be the important topics for studying. Other topics can usually be ignored and not studied.

Do you study lecture notes, textbook notes, or both?

Most instructors follow patterns in making up test questions. Look at your previous exams with the instructor and ask former students of the instructor. Do the following:

1. If exam questions come mostly from lectures, study lecture notes.
2. If exam questions come mostly from the textbook, study textbook highlights and/or outlines.
3. If exam questions come from both lecture notes and the textbook, study both.

Will the instructor give a multiple-choice exam, essay exam, or a combination of both? Do you study differently for these types of exams?

If your instructor usually gives multiple-choice exams, you will have to study <u>many</u> topics from a chapter or chapters. For example, a thirty-five question multiple-choice exam could test 25-30 <u>different</u> topics.

If the instructor gives essay exams, you will have to study <u>fewer</u> topics from a cahpter or chapters. An essay exam may test your understanding of four or five <u>major</u> topics. Obviously, it is important to predict the <u>likely</u> topics for an essay exam. Your prediction of test topics is not as important with a multiple-choice exam.

What specific topics are likely to be on an exam?

Read your lecture notes and textbook highlights/notes. If your lecture notes and textbook highlights are about the same topic, that topic is likely to be on an exam. List that topic for study. If the test is likely to be based on lecture notes, list important topics from your lecture notes.

If the test is likely to be based on textbook highlights/notes, list important topics from your textbook. If the test is likely to be based on both lecture notes and textbook highlights/notes, list important topics from both the lectures and textbook.

If the exam is likely to be multiple-choice, draw up a longer list of possible exam questions. Use your lecture notes, textbook notes, or both, according to the instructor's exam pattern.

Multiple-Choice Topics (longer list)

1.
2.
3.
4.
5.
6.
7.
8.
9.
10.
11.
12.
13.
14.
15.
16.
17.
18.
19.
20.

Essay Topics (shorter list)

1.
2.
3.
4.
5.
6.
7.
8.
9.
10.

Often it is helpful to predict possible exam questions with a classmate.

How will the instructor write the questions?

Examining the writing patterns in a text can give you a clue to the types of questions you can expect on a multiple-choice exam.

Descriptive (Concept-Example)

1. Which of the following is a characteristic of_____?
   a.
   b.
   c.
   d.

2. Which of the following is an example of_____?
   a.
   b.
   c.
   d.

3. Which is <u>not</u> a characteristic of _____?
   a.
   b.
   c.
   d.

Explanatory (Cause-Effect)

1. Which of the following is a reason for _____?
   a.
   b.
   c.
   d.

2. What was the result of _____?

a.

b.

c.

d.

Sequential

1. Which of the following events occurred first?

a.

b.

c.

d.

2. Which of the following sequences of events is in the correct order?

a.

b.

c.

d.

Practice taking a topic and turning it into a possible multiple-choice question. In the module on studying, it is suggested that you write the possible question on one side of a 3 x 5 card and an outline of the answer to the question on the other side of the card.

Topic	Question	Answer
Reasons for Revolutionary War with England	What are the reasons given for the Revolutionary War?	1. Taxes on stamps, food, went to England - taxes not shared with colonies.

You can expect the following types of questions on an essay exam according to writing patterns in the text:

Descriptive (Concept-Example)

1. Define _____and give an example of_____.

2. List the characteristics of _____.

Descriptive/Compare/Contrast

1. Compare and contrast _____and _____.

2. How do _____and_____differ?

Explanatory (Cause-Effect)

1. State the reasons for _____.

2. What was the result or outcome of _____?

Sequential

1. Trace the development of _____.

2. List the steps in _____.

Narrative

1. What is the reason for the conflict between _____and _____?

2. How does the setting affect the character?

3. What choices does _____have in the story?

Should you cram or distribute your studying?

Try to space out your reviewing and studying over a few weeks, rather than cramming the day or night before an exam. There is never enough time to study thoroughly when you cram. Often students cram and find that there are many topics they don't understand, and then simply run out of time. Also, it is difficult to maintain clear concentration after one or two hours of studying (cramming).

Spaced review will allow you enough time to study difficult topics. Also, it is easier to maintain clear concentration in shorter study periods spaced over a week or two-week time span.

STUDY AND MEMORY STRATEGIES

Why should you learn new memory and study strategies?

Most students study by repeating information. Students will read and reread material or in some instances, they will write and rewrite information. Unfortunately, this type of memorization is a very ineffective way to study and retain information. When students memorize this way, they repeat information that often doesn't have any meaning to them and, consequently, they don't remember the information. This module will present you with more effective ways to study and remember information.

MEMORY STRATEGIES

Least Effective	More Effective	Most Effective
REHEARSE	ORGANIZE	ELABORATE, EXTEND
REPEAT, RECITE	OUTLINE	CREATE VISUAL IMAGE
READ AND RE-READ	DIAGRAM	PARAPHRASE
UNDERLINE	TABLE	CREATE EXAMPLE
COPY	GROUP CLUSTER	CREATE ANALOGY
	NETWORK	ASK/ANSWER QUESTION
	VERBAL MNEMONIC	

There are three types of memory strategies: rehearsal, organization, and elaboration or extension. As the table indicates, rehearsal is the least effective and efficient way to retain and apply information. Organization is more effective than rehearsal in retaining, retrieving and applying information, and elaboration or extension is the most effective, efficient memory strategy.

1. SIMPLE REHEARSAL

Simple rehearsal or repetition is not very effective. The information is not organized or tied into what the person already knows. Therefore, the information is rehearsed in a rote nonmeaningful way and is likely to be quickly forgotten. Repetition or rehearsal may be appropriate for remembering lists or terms (quart of milk, loaf of bread, pount of butter), foreign language terms (voy, vas, va, vames), or symbols and formulas in math and science (a=lxw). However, simple rehearsal is not very effective when the content requires understanding of concepts (Why is Democracy referred to as the American Way of Life?), examples (describe 3 primary examples of socialistic government), cause/effect relationships (List 3 causes of the Great Depression and its effects on the American economy), etc.

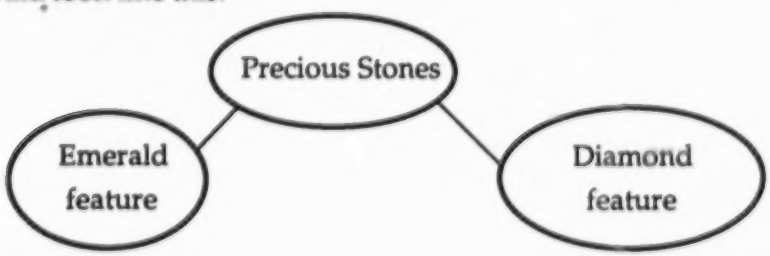
2. ORGANIZING STRATEGIES

Organizing strategies may include outlining, mnemonics diagramming, and grouping of information. These are effective strategies because, as we seek out and set up relationships among initially separate items of information, we add meaning to the material being studied. Also, by organizing or grouping items, our recall is improved. For example, you may be asked to remember sapphire, diamond, ruby and emeral. If you grouped these items under the category Precious Stones, you don't need to recall the four terms, only the class, Precious Stones. Precious Stones serves as a cue to guide your retrieval of the individual items.

3. VISUAL ORGANIZERS

Researchers know that information that the learner organizes is much more likely to be retained, recalled and used. Visual organizers group information in a meaningful way and are much more effective in retaining and applying information than repetition of information.

Mapping, or drawing a picture to help you remember the class is a good technique to improve your memory capabilities. A map for the class Precious Stones could look like this:



OUTLINE

A. Main Topic
   1. supporting detail
   2. supporting detail

B. Effect or outcome
   1. cause
   2. cause

VISUAL MAP

concept

feature feature

feature

You can create a map that is a time line.

Time Line	War of 1812	Civil War	Spanish-American
1800	1812	1865	1906

This is an effective organizer when dates and major events in history, literature, art, music, etc. are topics for study.

You can create a map to show a step-by-step sequence or process:

FLOW CHART FOR STUDYING

	STEP I	STEP II	STEP III	ETC.
BEGIN	Write a question on a 3x5 card	Write an outline of an answer on the 3x5 card	Elaborate add to the outline	

4. MNEMONICS

There are two types of mnemonic devices, acronyms and acrostics. An acronym is a word or phrase formed from the first letters of terms we wish to organize, store and

retrieve. For example, the acronym "HOMES" aids students in organizing, storing and retrieving the names of the Great Lakes (Huron, Ontario, Michigan, Erie, Superior). The acronym 'POWER' helps students to remember a writing process, Plan, Organize, Write, Edit, Revise.

It may not be possible to construct a word from the first letters of the terms. Therefore, an acrostic, a sentence or rhyme in which the first letter of each word is a cue to terms, can be developed. Suppose you will be tested on your ability to recall the cranial nerves (optic, oflactory, ocularmotor, troclear, trigeminal, abducens, facial, auditory, glosseal, vagus, accessory, hypoglossal). The acrostic, "On Old Olympus topmost top, a Finn and German viewed a hop", helps to remember the names of the cranial nerves.

In other instances, an acrostic may help you remember a set of steps. For example, the acrostic "My dear Aunt Sally", can help you remember the order of operations in algebra: Multiply, Divide, Add, Subtract.

Acrostics are an effective organizers when procedures or rules must be learned. They help learners store and retrieve lists of words, rules or sequences (Wingfield and Byrnes, 1981). You may find that you will have to remember formulas, steps or procedures in math and science, or lists of names or terms in science, geography and history courses.

Usually, students try to "memorize" the formula or list by repeating the information again and again. This type of repetition is not very effective, and the use of mnemonic devices or memory aiding strategies are much more effective way to organize, store, and retrieve information.

5. KEYWORD METHOD - FOREIGN LANGUAGES

The Keyword Method (Atkinson and Raugh, 1975) has been effectively used to remember foreign language vocabulary. The Keyword method follows two steps:

1. First, pronounce the foreign word and find an English Keyword, any word or phrase that sounds like the foreign word or part of the foreign word.

   Example:

French-English Translation	English Keyword
Fevrier (february)	Fever

Atkinson, R. and Raugh, M., "An Application of the Mnemonic Keyword Method to the Acquisition of a Russian Vocabulary Journal of Experimental Psychology, Human Learning and Memory, 1, 1975, 126-133.

2. Second, form a visual image of the Keyword interacting with the English translation of the foreign word.

Example:

I had a fever in February.

3. Third, pronounce the word (Fevrier). This should allow the Keyword (Fever) to be retrieved from memory which, in turn, should trigger retrieval of the associated concept in the interacting image (February).

6. **ELABORATION (EXTENSION)**

Elaboration or extension strategies go beyond repeating or copying the author's terms. Paraphrasing (putting the author's terms in your own words), summarizing, and generating visual images or examples of terms are all means of elaborating on, or extending the information in the text. We know that elaboration aids in retention and application of information. The elaboration combines the text information with your prior knowledge in a meaningful way and helps you to remember information.

HOW TO STUDY EFFECTIVELY

First obtain a pack of 3x5 or 5x8 index cards. Write a possible question on the front of each card. On the back, write an answer in outline form, as a visual organizer, or as a mnemonic. Then, you can study by elaborating on your outline, visual organizer, or mnemonic.

Study Cards

Step One 3x5 card (front)	Step Two 3x5 card (back)	Step Three
Write a possible question.	Write an answer in an organized way. The answer should be as an outline, table, diagram, time line, mnemonic, etc.	Study and memorize by elaborating on your outline, etc. You can summarize, paraphrase the outline, etc.

Example One	Example Two	Example Three
What are the features of a Democratic society?	Democratic Society 1. right to vote 2. freedom of press 3. freedom of speech	Elaborate or extend the diagram. State in complete sentences in your own words. Read your own elaboration aloud.

STRATEGIES FOR TAKING EXAMS

Your first step should be to preview all of the exam questions and identify those which are familiar or relatively easy questions for you. This will help to build up your confidence and prevent you from getting "hung up" on difficult questions.

RULE 1 - Do easy questions first!

The next step should be to determine how much time you can spend on each question. If you allot a set amount of time per question, you won't have to rush at the end of the exam or risk not being able to finish. For example, you may have 5 essay questions to answer in a fifty-minute period. Therefore, you can spend approximately 10 minutes per question.

RULE 2 - Plan and allot time for each question!

Next, reach each question carefully. Look for and underline key words or phrases such as "all, which is not, list, trace etc." If you skip over these key words, you may misinterpret the question and answer incorrectly.

RULE 3 - Read questions carefully and look for "key" words!

Matching and Multiple-Choice Exams

There will be many instances when you do not know the correct answer to a matching or multiple-choice question. Make educated guesses. In many instances, you will be able to eliminate one or two answers as incorrect. With a five-answer multiple-choice question, your chance of guessing correctly is one out of five. However, if you eliminate two possible answers, your chance of guessing correctly is now one out of three. Try to eliminate "way out" or incorrect answers and make

an educated guess.

RULE 4 - Eliminate answers that are obviously incorrect and make an educated guess when you do not know the correct answer.

Essay Exams

Outline key points and details and the order the points will be presented in your essay. Each key point will usually be one paragraph in your essay. If you write an essay without outlining and ordering key points, your essay will probably be disorganized, unclear and lacking supporting detail.

RULE 5 - Outline and order key points and details before you write your essay.

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TEACHER'S MANUAL

An interactive model of reading has been widely accepted in recent years. The interactive model assumes that readers use prior knowledge and strategies to construct meaning from a text (Anderson and Pearson, 1984). This interactive model differs dramatically from the skills model of the 1960's and 1970's where reading was viewed as text based and a piece-by-piece accumulation of often discrete skills. The teacher's role consisted primarily of asking questions during and after reading. Asking questions is assessment and not direct instruction. Durkin's (1979) classic study found that 99% of instructional time has been spent on assessment at the expense of direct instruction.

Reading comprehension instruction with a skills model often consisted of practicing skills such as drawing conclusions, locating details, etc. Many of these practice activities are considered non-meaningful or "blind practice" (Brown, et. al., 1981) and contribute to passive, superficial reading processes. A skills model is still widely used by many school systems and instructors.

Skills model instruction has contributed in part to the passive readers one encounters in classrooms. These readers are basically passive participants in an interactive process. Clinical observations with a think aloud reading assessment (TARA, Cicchetti and Monti, 1990) yield a profile of passive readers. These readers:

- Focus on decoding and pronunciation rather than constructing meaning.
- Rarely preview a text and develop an overall schema or framework for understanding the text.
- Fail to monitor or take stock of their comprehension.
- Rarely raise questions or predictions about meaning or summarize or paraphrase text periodically.
- Are frequently unaware of their lack of understanding of a reading selection.
- Rarely use their background knowledge about a topic to help them understand text.
- Are often bottom-up processors. They read text piece-by-piece and do not integrate and tie together text.
- If aware of their lack of understanding, do not know how to fix-up comprehension through generating examples, visual images, cues in text, etc.

The common profile is a passive approach to reading comprehension. The goal, therefore, is to teach students to become constructive readers. It is suggested that teachers and clinicians develop a profile of students' reading processes and then prescribe the various strategies contained in this text. TARA (Cicchetti and Monti, 1990) offers teachers and reading clinicians a means for assessing students' reading processes.

Winograd and Johnson (1985) have written extensively about passive readers. They concluded that successful students are active participants in their learning and that students fail not because of a lack of ability or effort, but because they do not employ goal-oriented reading strategies flexibly and efficiently.

This same passive approach to learning also applies to studying. Often students are told but are not shown how to study and consequently students do not apply strategies in their courses. These students are passive planners, notetakers, listeners and memorizers. Some characteristics follow:

Passive Planners

- do not accurately estimate the amount of time necessary to complete assignments or study for exams.
- usually turn in rushed, hastily completed assignments.
- cram and do last minute studying.
- forget or turn in partially completed assignments.
- rarely tie in school assignments with sports, social, job responsibilities, etc.
- rarely record or note weekly or monthly assignments.

Passive Notetakers or Highlighters of a Text

- rarely make up questions about a paragraph.
- have difficulty selecting important from non-important information.
- tend to highlight/note too much unimportant information.
- have difficulty summarizing answers to questions.

Passive Listeners/Notetakers

- either try to take verbatim notes or do not take notes.
- have difficulty selecting important from non-important lecture information.
- only note information written on chalkboard.
- rarely make up questions about the content of a lecture and listen for answers.
- miss lecturer's signals that information is important and should be noted.
- rarely recopy and elaborate on their notes.
- rarely work through math/science problems and notes before attempting homework.

Passive Memorizers

- rarely try to predict possible exam questions from notes and text
- attempt to study too much material as opposed to selectively studying information.
- study by reciting or rereading information in a rote, non-meaningful way.
- rarely organize information to be studied or paraphrase and elaborate on the information.

Active learners look for solutions to problems and question and monitor their performance while passive learners tend to avoid tasks or do them quickly without monitoring their performance.. It is important to treat passive learning as a temporary state which can be modified. However, effort alone will not help passive learners who lack requisite procedural and strategic knowledge. They must be taught why, when and how to apply reading, listening and study strategies. (Brown, Campione, Day,1981; Brown,1984; Weinstein, C. 1987)

The goals of this program are:

1. **To teach students how to use active, constructive reading and study strategies.**
2. **To teach students why and when to use active, constructive reading and study strategies.**
3. **To teach students to apply strategies, flexibly and independently to actual text materials and classroom situations.**

In order to accomplish these goals, a direct teaching model should be followed. Instructors are expected to directly teach reading and study strategies. The four steps to this direct teaching process are:

1. **Explaining to Students (Conditional Knowledge)**
   What they will be learning.
   Why they will be learning it.
   When they can apply it.

2. **Cognitive Modeling for Students (Procedural Knowledge)**
   The steps or procedures are modeled.
   The thinking that accompanies the strategy is made explicit.
   (Cognitive Modeling or Thinking Aloud)

3. **Reciprocal Teaching (Practice Conditions)**
   The teacher and students alternate teaching roles and cognitively model various strategies to each other.
   Students are provided with practice and feedback using authentic materials.
   The instructor gradually releases responsibility to the students for independently completing the practice assignments.
   Reciprocal teaching helps shift responsibility to the students for independently applying the strategies.

4. **Integrating and Reviewing**
   The instructor continuously integrates and demonstrates how strategies are connected and complementary.

Explaining to Students (Conditional Knowledge)

The objective for a lesson and the reasons for learning the strategy should be shared with the students. The situations when the strategy should be used are also shared with the students. Students must learn <u>why</u> and <u>when</u> to apply strategies, not simply <u>how</u> to carry out a strategy. (Paris and Oka, 1986)

Cognitive Modeling for Students (Procedural Knowledge)

Cognitive modeling is a very effective way to teach students how to use reading, and study strategies. Cognitive modeling, however, is much more than a demonstration of the steps of a strategy. Cognitive modeling makes explicit the thinking through of alternatives, choices, rethinking and adjustments one makes as a strategy is being used. The teacher's thinking is shared with students. The mental process of the expert, the teacher, is shared with the novice, the student. (Whimbey, Lockhead, 1986, Bandura, 1986)

Cognitive modeling requires you to think aloud (vocalize) what is going on in your mind as you apply a strategy such as previewing a chapter. Thinking aloud makes your thinking visible to students since thinking is an invisible process. Thinking aloud can be facilitated if you say to yourself, "What are <u>all</u> of the <u>thinking processes</u> that a novice or poor reader/listener, etc. would have to follow to carry out a particular strategy?" Try to avoid mental leaps between steps.

Thinking aloud may not be an easy process to model. Teachers often apply strategies automatically and teachers are used to explaining and not cognitively modeling processes. Try to put yourself in the place of the inexperienced or less skilled students as you think aloud.

The following examples point out the difference between explanation and cognitive modeling:

Explanation
Previewing Strategy

"First, you look for a major heading and sub-headings. Then look for the number of paragraphs about a topic. Pick-out the words in italics or bold faced type. Put question marks beside those words you don't understand."

Cognitive Modeling
Previewing Strategy

"As I skim this, I notice that there are two major headings, Classical and Operant Conditioning. There are three pages about classical conditioning and five pages about operant conditioning. It is probably more important, so I'd better read it carefully later. The words in bold faced type: extinction, intermittent reinforcement, etc. are all new to me so I may want to look them up in the glossary before I read."

The choice and complexity of language that one uses to cognitively model a strategy should be adjusted according to the students' background knowledge about a topic area. Therefore, students' background knowledge about the selection should be assessed prior to cognitive modeling. The complexity of the language should be slightly in advance of the students' language. (Vygotsky, 1978)

Students' Prior Knowledge

The modules in this text teach heuristics or general strategies for studying, reading, etc.. In order to use the general strategies, however, students should have sufficient background-knowledge about the selections. Research strongly suggests that the amount and organization of knowledge available to students about specific topics greatly influences their ability to comprehend text about those topics (Anderson, R.C., 1977, 1984,; Pearson and Johnson, 1982). Students need subject matter knowledge in order to use strategies effectively. In the following pages, suggestions for activating and organizing prior knowledge and teaching concepts are provided.

Reciprocal Teaching

Reciprocal teaching is a dialogue between teacher and students. As part of this dialogue, teacher and students alternate demonstrating their thinking and use of a strategy. Gradually the students should be expected to control the dialogue and the teacher should fade out prompts and assistance. All students should be expected to participate. If students experience difficulty, the teacher may model, prompt, give clues and direction to the students. (Palinscar and Brown, 1985)

Reciprocal teaching offers the teacher the opportunity to diagnose and assess the students' thinking and use of a strategy. Adjustments such as more cognitive modeling, or practice can then be made. Require the students to constantly vocalize their thinking. If the students need assistance, prompt and expand on their thinking. Above all, reciprocal teaching requires students to be active, constructive learners.

During reciprocal teaching, students should receive feedback and support from the teacher. The feedback should be specific and reinforce the effort and process used by the student and not simply the product or correct answer. Successful performance should be attributed to the student's efforts and the following of a strategy. Students must have successful guided practice with authentic materials before they can be expected to independently apply the strategies. Each strategy lesson also provides an opportunity for reinforcing students' positive beliefs about efforts and performance. Students with negative beliefs about capabilities are more likely to give up and not persist with strategies.

When students do make errors, the teacher should try to give the students information about the types of errors made and how to avoid certain types of errors.

The teacher should give the students TIME to think. Sufficient wait time for responses must be provided. The teacher should require the student(s) to follow and execute a particular strategy. The Thinking Guides at the end of modules provide the teacher with questions to keep the students on track. The teacher provides structure and direction but not answers. Teachers should provide maximum structure and direction when students begin to practice a strategy. As the students achieve more success, the amount of structure and direction should be gradually reduced.

Examples of structure and direction during reciprocal teaching are:

"Can you make up a question for the paragraph from the heading?"

"Would rereading the sentence help you to summarize an answer?"

"How might you organize these headings?"

"What do you think the author's purpose is?"

Integrating and Reviewing

It is necessary to show how strategies are connected and complementary. Do not assume that students will make connections on their own. Review and integrate at the beginning and end of each lesson previously taught strategies.

Practice Materials

Materials for cognitive modeling and reciprocal teaching should usually be from one to three pages in length. The materials should have a beginning, middle and end and should be drawn from actual textbooks. It is suggested that instruction begin with paragraph length materials and the length of materials should be gradually increased. The appropriateness of the material for strategy instruction can be assessed by activating students' prior knowledge through activating and clarifying questions.

Activating and Organizing Students' Prior Knowledge

Students will be learning to activate and organize their prior knowledge as part of the Previewing Strategy. You can assist students with the Previewing Strategy by skimming a selection and choosing a few key headings or concepts. These headings or concepts should be essential for understanding the selection. Then, a series of questions can be asked:

1. Activating Questions:

   What comes to mind when you think of...?
   What do you associate with...?
   What does ... mean to you?
   What picture or scene do you associate with...?

2. Clarifying Questions:

   When students respond ambiguously, you may ask:
   Please explain what you mean by...?
   Can you give an example of...?
   What might be another word for...?

3. Organizing Questions:

   How can this information be grouped?
   What headings or labels can be added?

4. Visual Mapping Questions:

   How can this information be shown visually?
   The type of map will depend on the topic and subject.
   Time lines, compare/contrast charts, diagrams, flow charts, etc. are common ways to visually organize students' background knowledge.

Teaching Concepts/Vocabulary

At times, you may decide that students do not understand a key concept(s). Teach the concept before strategy instruction. A process for concept instruction is presented on the following page. Concepts help students organize, store and retrieve information

Teaching Concepts

Assume that the concept of reckless is necessary for background knowledge about a particular story and that you have determined that your group doesn't understand the concept. The concept could be taught in the following way:

1. Define and draw attention to the critical features of the concept. Critical features define the concept. Write on the chalkboard:

   A person who is not cautious or concerned with his/her safety or the safety of the others.

   The critical features can be repeated orally and underlined for emphasis.

2. Present a familiar example of the concept:

   A person who drives 60 miles Per hour in a 20 mile per hour school zone would be considered reckless because he is not cautious and would injure himself or others.

3. Present new examples to assess mastery of the concept:

   Would a young boy be considered reckless if he rode a skateboard into a crowd of people on a sidewalk? Why?

   Would a man be considered reckless if he drove at 55 miles per hour on a highway in a heavy snowstorm with poor visibility? Why?

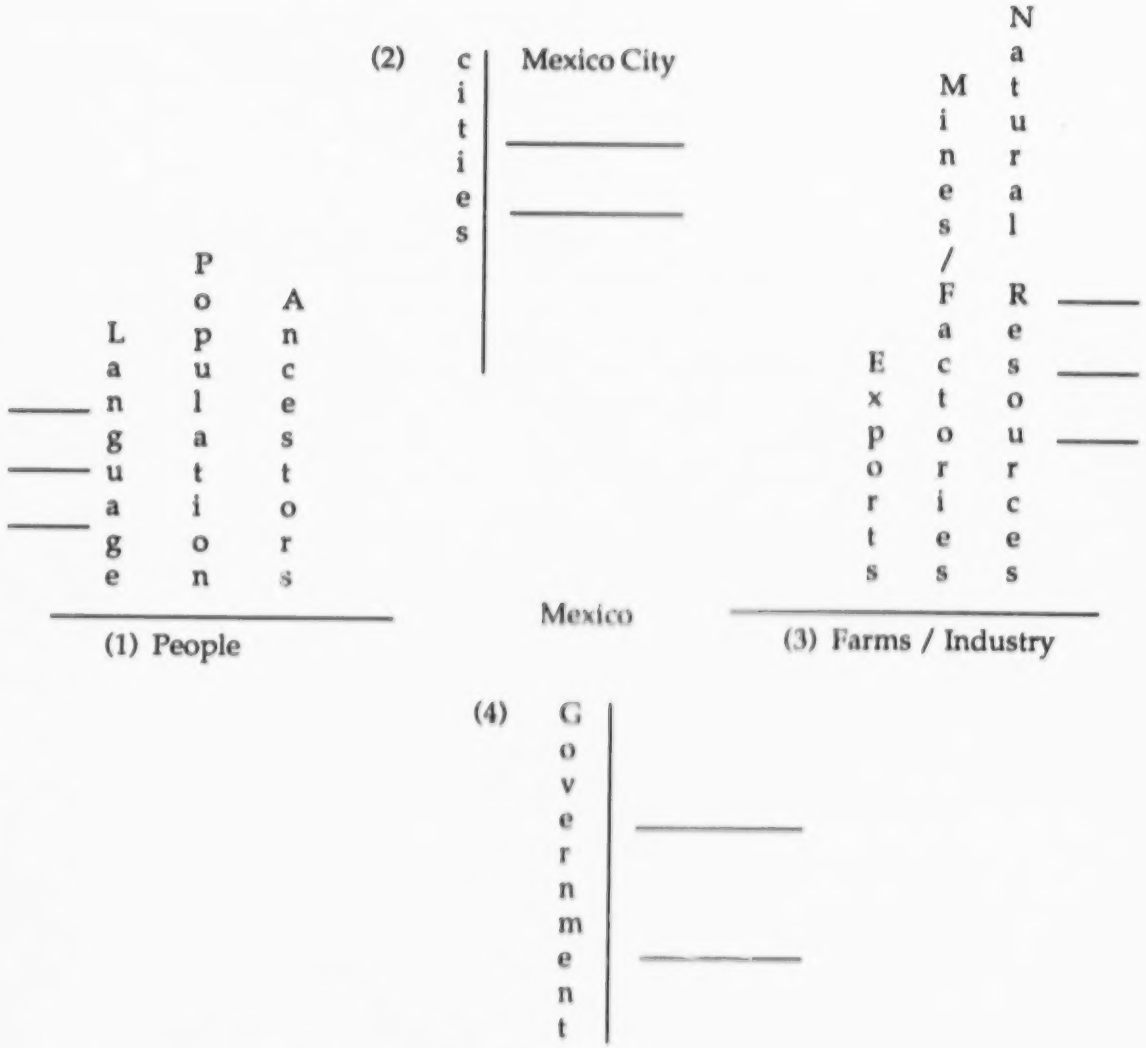
   Encourage discussion and clarification of the concept.

Visual Mapping

Key concepts can be organized visually for students. The visual map, schematic, diagram, etc. helps students to organize and integrate new concepts. This strategy is especially effective for content areas such as social studies and science. As you map material, you are also modeling part of the previewing strategy.

The steps for developing a visual map are as follows:

1. Read a chapter and extract the main topics or concepts.
2. Organize the concepts in a teaching order.
3. Extract supporting details for each main idea or concept.
4. Arrange the information on a visual map.
   The type of map will depend on the content area, i.e., history-time lines, science-diagrams



Note that spaces are left in the map for students to add supporting detail.

DIFFERENCES - NORTH & SOUTH
PRIOR TO CIVIL WAR

	North	South
Economy		
Slavery		

Transfer of Training

The success of any learning program depends on whether students can flexibly and independently apply strategies in new settings with new materials. Transfer is more likely when

1. **Students know why and when to apply strategies.**

2. **Teachers provide sufficient cognitive modeling with a variety of real world materials.**

3. **Students' practice efforts are successful and a gradual shift to independent applications is made.**

4. **Reciprocal teaching provides practice and coaching for learning new strategies. As a rule of thumb, students need three to four times more reciprocal teaching than cognitive modeling.**

Research indicates that good readers, writers, and students possess metacognitive or executive control over the reading, and studying processes. That is, they assess a task, raise questions, seek possible alternatives, select a strategy, monitor their performance and modify performance as necessary.

The cognitive modeling and reciprocal teaching are intended to make students aware of their thinking processes. As students become more aware of their thinking processes, metacognitive or executive control of thinking should develop.

The strategies presented in this text are general processes or heuristics. That is, the strategies will often work but must be adapted to the content and demands of the task. Students must learn to diagnose a task, select a strategy, implement and monitor the strategy and adjust as necessary. (Duffy and Roehler, 1987)

Scope and Sequence Chart for Strategies

The timing and sequence for teaching these strategies have been developed from field testing and teaching the modules. The introduction of strategies or part of strategies may vary depending on the entering skills and motivation of students. The goal is to develop active, independent readers and students. therefore, it is especially important to begin to teach reading comprehension strategies to kindergarten, first and second grade students. Students must view reading as constructing meaning as well as decoding.

Please refer to this scope and sequence chart for a suggested order and timing for teaching reading and study strategies.

	Kindergarten	First Grade	Second Grade	Third Grade	Fourth Grade
Assessing, Teaching Concepts/ Vocabulary	Yes	Yes	Begin to shift responsibility to students for previewing a text and identifying key words/ideas.		More responsibility for previewing.
Previewing	Narrative Predictions before reading	Narrative Predictions before reading	Narrative Predictions before reading	Narrative Begin to shift reponsibility to students for completing a narrative preview guide.	Narrative
			Expository Identify important topics, develop questions and purpose for reading	Expository Begin to shift responsibility to students for completing a expository text preview guide.	Expository
Comprehension Monitoring	Predictions during reading	Predictions during reading	Predictions during reading	Predictions during reading	Predictions during reading
		Summaries during reading	Summaries during reading	Summaries during reading	Summaries during reading
				Questions during reading	Questions during reading
Comprehension fix-ups	Visual Imagery	Visual Imagery	Visual Imagery	Visual Imagery	Visual Imagery
			Examples Reading Ahead	Examples Reading Ahead Rereading	Examples Reading Ahead Rereading Use of signal words

Grades	Kindergarten	First Grade	Second Grade	Third Grade	Fourth Grade
Text Patterns	Narrative Setting Characters Problem Solution	Narrative Same	Narrative Same	Narrative Same	Narrative Same
		Description	Description	Description Explanatory	Description Explanatory Sequential

Grades	Five	Six	Seven	Eight	Nine	Ten	Eleven	Twelve	College
Highlighting/ Notetaking	Introduce — — —

Teaching Considerations

Strategy instruction differs from most other types of instruction in which teachers have previously engaged. Most often, teachers provide content or skill instruction and strategy instruction is more complex. Most teachers are not accustomed to providing conditional knowledge (why and when a strategy is appropriate) or cognitively modeling and reciprocally teaching strategies. Consequently, there are new instructional skills that teachers must learn. Practice will be necessary for the approaches to become automatic and smooth.

In addition to learning new instructional skills, strategy instruction requires different expectations and interaction with students. For example, reciprocal teaching, the alternating of roles between teacher and students, will be a new experience for most teachers. Changing roles and expectations requires risk-taking and practice.

Students may need three to six weeks or more intensive instruction before mastering a strategy. Therefore, teachers will have to plan and conduct instruction over longer time periods. Typically instructional skills are taught during a one to two week period. Teachers will have to sustain their effort and the effort of students over a fairly long period of time in order to see results.

Teachers should teach only <u>one</u> strategy at a time. If they try to teach more than one strategy at the same time, they will probably frustrate and overwhelm students. Eventually the strategies will "come together" for students and be used as an integrated, holistic process.

MODULE
SUCCESSFUL STUDY STRATEGIES

Students will be learning:

1. To identify the reading, writing, listening and studying demands at different levels of education.

2. To adjust to the demands and set specific goals for reading, listening and studying.

Rationale for the Module:

Many students have only vague ideas about educational demands and differences at the elementary, junior high school. high school and college levels. They make vague statements about the difficulty or having to spend more time studying. They attribute good grades to vague concepts such as effort or time, and are not aware of specific strategies that successful students use. Many students maintain myths about the value of cramming and memorizing and do not realize the need to become a more effective learner.

Instruction

Discuss and clarify the study demands at different levels of education and how students might adjust to the demands. Try to have each student develop a list of specific goals for improving his/her performance. As the course progresses, the students should review their original goals to determine progress and to adjust or set new goals.

MODULE
PLANNING AND ORGANIZING STUDY

Students will be learning:

1. To complete and maintain a marking period or semester study plan.

2. To complete and maintain a daily study plan.

Rationale for the Module

Maintaining a long term and short term study plan helps students make effective use of their study time. Plans help students avoid the hasty, last minute studying or completion of a paper or project. Some students keep small notebooks to record homework assignments. Most students write assignments on slips of paper and do not have systems for planning their studying.

Cognitive Modeling

There are many commercially prepared daily and monthly planners available. You may ask students to purchase a commercially prepared planner or make copies of the samples in the text. Cognitively model for students the completion of a marking period or semester study plan. Use course syllabi if available or the marking period plans of other teachers.

Cognitively model for students the completion of a daily study plan. Use the students' classroom assignments and homework. Think through the guide with students.

Reciprocal Teaching

Monitor and give feedback to students during their complee daily study plans. Gradually give them the responsibility for evaluating their daily study plans using the guide on page. Check the daily plans at two week intervals. Continue to stress the importance of maintaining plans, throughout the semester or marking period.

MODULE
PREVIEWING STRATEGY

Students will be learning:

To preview a story unit or chapter in a textbook.

Rationale for the Module

Previewing helps readers activate their background knowledge about topics and use the existing information to tie together the individual sentences and paragraphs in passages. Research strongly suggests that readers' organized knowledge about a topic(s) contributes significantly to the readers' subsequent comprehension about the topic.

Previewing helps readers to form a schema about the passages. A schema may be considered a number of instances and associations about a topic(s). As the readers read a text, the schema helps them to fill in missing information and connect sentences and paragraphs. Previewing helps readers form a schema about the text, assess their existing knowledge of the material, important and non-important parts of the text, set goals, and adjust their active reading. Often, students treat all information as important. Therefore, they read all material at the same rate and consequently, use their reading time inefficiently. (Schank, Abelson, 1977).

You may wish to use Bransford and Johnson's (1972) passage about "washing clothes" to illustrate the importance of devloping a schema about a text. Provide the passages for reading without a title and then provide the title.

The procedure is actually quite simple. First you arrange items into different groups. Of course one pile may be sufficient depending on how much there is to do. If you to go somewhere else due toa lack of facilities, that is It is the next step; otherwise, you are pretty well set. It is important not to overdo things. That is, it is better to do too few things at once than too many. In the short run, this may not seem important but complications can easily arise. A mistake can be expensive as well. At first, the whole procedure will seem complicated. Soon, however, it will become just another facet of life. It is difficult to foresee any end to the necessity for this task in the future, but then, one can never tell. After the procedure is completed, one arranges the materials into different piles again. Eventually they will be used once more and the whole cycle will then have to be repeated. However, that is part of life.

Without a schema to organize the paragraph, the sentences are disconnected and not meaningful.

Teaching experience suggests that most students do not raise questions or set goals prior to reading. They "jump" into reading without adequately previewing the text.

Cognitive Modeling

Cognitively model for students the previewing process. Think through and follow the previewing guide with practice selections. Cognitive modeling of the process with one or two practice selections is likely to be insufficient. Many students have been told to preview but have never learned or applied a previewing process. Visually mapping important topics is an especially important part of the previewing process. Mapping helps students to organize information and subsequently remember the information. Model the completion of the Previewing/Thinking guide for a chapter(s) with students.

Reciprocal Teaching

Engage the students in reciprocal teaching. Assign the students practice selections and have them complete the preview guide. Monitor and give feedback to students during their completion of the assignments. Stress that different readers may have different goals depending on their background knowledge about the material. Question or prediction generation seems to be a difficult task for some students. The questions then develop are often very literal or factual. Model both literal and higher level questions.

MODULE
COMPREHENSION MONITORING STRATEGY

Students will be learning:

To assess or monitor their comprehension of material by forming questions about the material, making predictions and summaries.

Rationale for the Module

Comprehension of reading material is an active, constructive process. Effective readers activate schemata, fill in missing information and develop predictions, questions and summaries.

You may wish to use this example:

> He put down $10.00 at the window. His friend tried to give him $5.00, but he refused to take it. So, when they got inside, he bought him a box of popcorn and a candy bar.

The reader may question whether the paragraph is about a race-trace schema, a bank deposit schema or a movie-goer schema. One continues to read and search for an answer to the question. In this instance, the popcorn and candy ties to-gether a "movie". The man probably bought tickets for a friend and he wished to share expenses.

The goal is to teach readers to actively create questions or predictions rather than decoding and passively reading a text.

Many students are passive readers. They read words and rarely stop or pause to determine whether they understand a word, sentence, etc. Consequently, they are not aware of their lack of understanding and the need to remedy or fix-up their comprehension. Students need to assess or monitor their understanding of reading material. (Garner, et. a1.,1983)

The module can be broken down into three parts: 1) forming questions, (2) predictions and (3) summarizing or paraphrasing. , It is suggested that you begin by modeling predictions and summaries.

After surveying research, Anderson, J.R. (1985) concluded that question generation and question answering contributed to good memory with question generation being most important. Question generation is also a critical part of the comprehension fix-up strategies and the listening/ notetaking strategy. Active, constructive reading and listening require question making. Also emphasize that multiple questions can be generated for a paragraph and that one doesn't always generate a question at the beginning of a paragraph. In some instances. the question or prediction may not be asked until the middle of a paragraph.

Further, answers to questions or predictions may be found in subsequent paragraphs and some questions may be "on hold" for a while or not answered.

Summarizing and paraphrasing are also ways to monitor comprehension. Students' summarizing skills are likely to be unsophisticated and develop slowly. Our experience suggests that summarizing skills don't become sophisticated in many instances until high school and college. Initially, students will omit unimportant information or restate important information. More sophisticated students will omit unimportant information and condense important information. The most sophisticated students will omit unimportant information and paraphrase important information.

You may wish to use the following generalizations to improve summarization: repeated information, topic and concluding sentences in a paragraph are usually important and should be part of a summary.

Cognitive Modeling

Cognitively model the comprehension monitoring process with practice selections. Stress each part of the process, developing questions, predictions and summaries. Your consideration of alternatives, choices, adjustments, etc., should be thought aloud and made explicit to the students. This may be the most difficult module for students to master and will probably require the greatest amount of cognitive modeling and practice.

Question making as stated previously is a critical part of this strategy. Model different types of questions such as factual, inferential and application type questions. Students should learn to generate higher level questions in addition to "who and what" questions.

Reciprocal Teaching

Assign the students practice selections and engage in reciprocal teaching with your students. The consideration of alternatives, choices, and adjustments must be shared aloud. Try to model and reinforce students especially for paraphrasing. If students paraphrase text, they link the information to their own background. Consequently, the information should be understood and recalled readily.

MODULE
COMPREHENSION FIX UP STRATEGIES

Students will be learning:

1. To draw inferences and construct meaning between the text and one's background knowledge.

2. To draw inferences and construct meaning among the words, phrases, sentences and paragraphs of a text.

Rationale for the Module

Inferential comprehension requires a student to add information and reasoning to a text in order to connect and understand the text. This type of comprehension makes greater demands on the reader than simply identifying important topics or summarizing key points. Consequently, this module will require extensive cognitive modeling and reciprocal teaching.

This module must be integrated with the Module: Comprehension Monitoring. The reader should begin by generating questions. In this module, the questions focus on uncovering the type(s) of relationships that exist among sentences and paragraphs and also the meaning of words, phrases, and sentences.

Cognitive Modeling

Constructing Meaning Between Text and Background Knowledge

When a reader is unsure of the meaning of a word, phrase, or sentence, effective fix-up strategies are to create examples or visual images. These strategies make use of background knowledge to construct meaning. They also force students to elaborate on the text and therefore, improve recall of information. These fix-up strategies should usually be modeled first

Constructing Meaning Among Text Elements

When a reader is unsure of the meaning of a word, phrase, or sentence, an effective fix-up strategy is to read ahead. This often works well with descriptive writing patterns where features and examples define some concept.

When a reader is unsure of the relationship among sentences, rereading sentences, looking for signal words, pronouns and text patterns are effective fix-up strategies. These fix-up strategies are most difficult for some students and should be modeled last.Some writing does not contain topic sentences, signal words, etc. Therefore, the reader has to make his/her own connections and form relationships. Modified cloze materials can be effectively used for practice.

Reciprocal Teaching

Engage in reciprocal teaching with your students. Cognitively model the various types of comprehension fix-up strategies and gradually release responsibility to your students for using these strategies.

MODULE
IDENTIFYING WRITING PATTERNS

Students will be learning:

1. To identify the writing patterns of textbook authors.

2. To identify the different types of writing patterns commonly found in textbooks.

Rationale for the Module

There is a considerable body of research which suggests that readers who are aware of authors, writing pattern(s) are better able to comprehend texts than readers who are unaware of the authors' writing patterns. This module also stresses that signal words and reference ties are ways that authors clarify ideas in their texts. Mayer (1985) concluded that when students recognize the type of writing pattern for a text, they are better able to select relevant information and build internal connections. This module especially supports thehighlighting/notetaking module.

Teaching experience suggests that few students have an understanding of different types of writing. Consequently this is a difficult module for many students. Many students are not able to view a text from the perspective of an author's purpose and pattern of writing. Identifying topic sentences, repetition, signal words, ties, etc., is a complex process. Stress that the content of this module will also help students with their writing. Review and integrate this module with the modules on highlighting/ notetaking and comprehension fix-up strategies.

Cognitive Modeling

Cognitively model for students the identification of the writing patterns used by textbook authors with the practice materials. Focus on the authors' purposes and the devices they use to clarify meaning of their material. Be sure to point out that an author may use more than one writing pattern. This strategy may also be taught by modeling and writing the various writing patterns on the chalkboard. Use paragraphs from social studies, science, math and other texts to model the identification process. Identify a topic sentence and show how the other sentences in the paragraph relate to the topic sentence.

Reciprocal Teaching

Engage the students in reciprocal teaching. Assign the students practice materials. Ask them to identify the author's purpose and writing pattern and the signal words or structure of the material. Monitor and give feedback to the students during the completion of the assignment.

MODULE
HIGHLIGHTING/NOTETAKING STRATEGIES

Students will be learning:

To highlight or take notes from a text.

Rationale for the Module

Highlighting or taking notes from a text helps students studying in two ways. First, the amount of information to be studied is reduced by 70-80% as only important information is highlighted or noted; and second, important information is a likely source of test questions. Many students have been told to highlight or take notes from a text, but these students have not received direct instruction in taking notes. Generally, students will highlight too much or too little information. They rarely have a strategy for highlighting. This module should be integrated with the module on identifying writing patterns. If students are aware of an author's writing pattern, highlighting becomes easier. Also the general strategies for summarizing will help the highlighting process.

Cognitive Modeling

Review the comprehension monitoring strategies for generating questions, predictions and summaries. Cognitively model the process of developing questions, and then highlighting the answers to the questions or summaries. Use the practice selections from a variety of texts. Emphasize that comprehension monitoring, comprehension fix-up and highligtaking will be done simultaneously and are not separate activities.

Teaching experience suggests that annotating is rarely understood or used by students. Annotating will probably have to be taught separately from highlighting. Students' understanding of writing patterns is especially helpful with annotating.

Reciprocal Teaching

Engage the students in reciprocal teaching. Assign the students practice selections (paragraphs) and alternate highlighting or taking written notes from the selections. Provide students with feedback and support.

MODULE
LISTENING/NOTETAKING STRATEGY

Students will be learning:

1. To write questions about important topics in a lecture.

2. To actively listen to the lecture for answers to the questions and write answers in abbreviated, shorthand.

Rationale for the Module

Many students are passive listeners. They only note information written on the chalkboard or given in slow dictation form. Students have difficulty identifying a main point, turning the main point into question, and listening for and noting an answer. Research indicates that listening comprehension and reading comprehension are very similar processes. Good readers are usually good listeners. Stress that the listening and notetaking module follows the same process as the comprehension monitoring module. Also stress that previewing, reading and highlighting a chapter before a lecture about the chapter increases students' listening and notetaking skills.

Teaching experience suggests that students often do not use their notes to generate possible exam questions. Notetaking is a preequisite for preparing for exams.

Cognitive Modeling

Obtain brief videotapes (20-30 minutes) of actual classroom lectures or NOVA or Learning Channel programs from public television. Play the tape and model notetaking on the chalkboard. Think aloud about why a particular topic is important or why certain abbreviations are used or a piece of information is indented, etc. By stopping the videotape, your words do not compete with the lecturer's words on the videotape and students can focus on your cognitive modeling. Emphasize the specific cues that various lecturers use to make important points.

Also after the lecture, model how probable exam questions can be generated from the lecture notes.

Reciprocal Teaching

Assign the students to listen to a videotape and use the notetaking process presented in this module. Upon completion of part of the assignment, have the students share their notes with classmates along with the reasoning for their product. Also, the students should practice elaborating on their notes.

MODULE
PREPARING FOR EXAMS

Students will be learning:

To use textbook highlight/notes and lecture notes to identify probable exam questions.

Rationale for the Module

Many students do not try to predict test questions and, consequently try to study everything. The result is inefficient, ineffective studying which leads to cramming because there is too much material to cover. Some teachers provide students with too much structure for exams as they tell students what they need to know. Students should learn to predict test questions independently.

Cognitive Modeling

Cognitively model developing probable test questions with the practice selections that have been previewed, actively read and highlighted. Draw up tests of probable questions for both multiple-choice and essay exams.

Also cognitively model developing probable test questions from lecture notes.

Reciprocal Teaching

Use new selections that students have actively read and highlighted. Cognitively model predicting test questions and gradually shift resonsibility to the students for making predictions. You may want to assign students to small groups (3, 4 students) and have the students collaborate on developing probable test questions.

MODULE
STUDY AND MEMORY STRATEGIES

Students will be learning:

To use organized, elaborative rehearsal strategies as opposed to simple rehearsal. repetition. and rewriting.

Rationale for the Module

Most students use simple rehearsal strategies for studying for tests. The limitations of simple rehearsal should be made clear, and the reasons why organized, elaborative rehearsal is most effective should be emphasized. Stress that rote rehearsal is nonmeaningful and that information rehearsed in an organized, meaningful and elaborative way is more likely to be remembered.

Cognitive Modeling

Cognitively model the studying process using probable test questions. Think aloud as you complete study cards with the students. Engage in reciprocal teaching with students as cards are completed. It is essential to model and develop visual maps, diagrams and memonics with the material.

Reciprocal Teaching

Have the students develop lists of probable test questions and then prepare study cards for the questions. Upon completion of parts of the assignment, have students share their study cards and the reasoning for their product with their classmates and teacher.

MODULE
STRATEGIES FOR TAKING EXAMS

Students will be learning:

To use test-taking strategies.

Rationale for the Module

Smart test-takers can earn higher grades than students who have studied and learned the information equally well but are poor test-takers. the use of test-taking strategies can help to decrease anxiety and improve test performance. If students follow a plan for test-taking, they have some control of the testing situation and anxiety should be diminished.

Cognitive Modeling

Develop test questions from the practice selections. Cognitively model the test-taking strategies with the tests.

Reciprocal Teaching

Take the test as a group. Stop after each item, model your reasoning for a choice and engage in reciprocal teaching with the students. Think aloud and alternate sharing your reasoning with the students.

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